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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,488	12/20/2004	Takashi Yokoi	122157	5500

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ALEXANDRIA, VA 22320

EXAMINER

GOINS, DAVETTA WOODS

ART UNIT	PAPER NUMBER
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2612

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/518,488

Applicant(s)

YOKOI ET AL.

Examiner

Davetta W. Goins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-22 and 24 is/are allowed.
- 6) ☒ Claim(s) 1-10, 23 and 25 is/are rejected.
- 7) ☒ Claim(s) 26 and 27 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Allowable Subject Matter

1. Claims 11-22 and 24 are allowed.
2. Claims 26 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Huang (US Pat. 5,798,689).

In reference to claims 1, Huang discloses the claimed a tire, a wheel on which the tire is mounted, and a cavity portion defined by the tire and the wheel, wherein a tire-information transmitter is provided at a position spaced from both of the wheel and the tire in the cavity portion, which is met by tire pressure gauge 1, 7, including a transmitting means 3 for transmitting the detected pressure. The pressure gauge 7 is placed on a rim flange such that the

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bottom ends of the coupling tub 71 and the coupling seat 8 form a "clearance" with the metal wheel 400 (col. 5, lines 1-17; Figure 9).

In reference to claim 2, Huang discloses the claimed ring-shaped elastic body equipped with the tire-information transmitter is provided along the periphery of a rim base of a rim of the wheel, which is met by elastic strap 41 which extends around the metal wheel 400 (col. 3, lines 54-62).

In reference to claim 9, Huang discloses the claimed inner pressure sensor is built in the tire-information transmitter, which is met by signal generating device 3 located within the hollow base 10 of cap 11 of the pressure gauge 1 (col. 2, lines 40-67).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 4 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang.

In reference to claims 3, 4, 23, although Huang does not specifically disclose the claimed ring-shaped elastic body is a rubber band, he does disclose that each pressure gauge 1 is secured to the metal wheel 400 by means of an elastic strap 41 which extends around the metal wheel 400

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(col. 3, lines 54-62). Since Huang discloses the use of an elastic coupling means to the wheel, it would have been obvious to one of ordinary skill in the art at the time of the invention to use any type of elastic material such as a rubber band, to ensure that the tire assembly can be easily installed and/or removed from the wheel.

7. Claims 5-7 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Benedict et al. (US Pat. 6,722,192 B2).

In reference to claims 5-7, 25, although Huang does not specifically disclose the claimed flexible tube equipped with the tire-information transmitter is provided along the inner surface of the crown portion of the tire, he does disclose a pressure gauge 1 including a signal generating device 3 for transmitting the pressure (col. 2, lines 40-67). Benedict discloses a flexible antenna 2 placed along the side of the tire bead 10 and extending from the wheel to the inside of the tire for detecting pressure and transmitting the data (col. 3, lines 56-65; col. 5, lines 36-56). Since both Huang and Benedict disclose tire pressure sensors placed within the tire, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a flexible tube for transmitting a signal, as disclosed by Benedict, with the system of Huang, to provide a structure of the sensing unit that can not be easily destroyed.

8. Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Rensel et al. (US Pat. 5,977,870).

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In reference to claims 8, 10, Huang does not specifically disclose the claimed tire-information transmitter is a transponder. Rensel discloses an apparatus and tire construction exploits the wireless communications capability of transponders to receive and transmit data within the tire to a fixed storage device that retains the tire ID and service history (temperatures, pressures, etc.) and to receive and transmit same or similar data to an external source via radio frequency (RF) communications (col. 5, lines 10-30). Since both Huang and Rensel disclose the teaching of sensing and transmitting tire pressure, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of using a transponder to transmit the signal, as disclosed by Rensel, with the system of Huang, such that the system can determine which tire is low in pressure.

9. The prior art of record and not relied upon is considered pertinent to the applicant's disclosure as follows. Shumway (US Pat. 4,048,614), Huang (US Pat. 6,194,998 B1), which disclose tire pressure warning systems.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davetta W. Goins whose telephone number is 571-272-2957. The examiner can normally be reached on Mon-Fri with every other Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on 571-272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Davetta W. Goins
Primary Examiner
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D.W.G.

January 7, 2007